

CLAIMS

What is claimed is:

- 1 1. A machine-implemented method, comprising:
2 establishing, within a global operating system environment provided by an operating
3 system, a non-global partition which serves to isolate processes running
4 within the non-global partition from other non-global partitions within the
5 global operating system environment;
6 associating a first resource limit with the non-global partition, wherein the first
7 resource limit indicates a maximum amount of a particular resource that can
8 be allocated to the non-global partition; and
9 associating a second resource limit with a group of one or more processes within the
10 non-global partition, wherein the second resource limit indicates a maximum
11 amount of the particular resource that can be allocated to the group of one or
12 more processes.
- 1 2. The method of Claim 1, wherein a global partition administrator sets the first resource
2 limit.
- 1 3. The method of Claim 1, wherein a non-global partition administrator sets the second
2 resource limit.
- 1 4. The method of Claim 1, further comprising:
2 receiving a resource allocation request for the particular resource from a process
3 executing in the group of one or more processes;
4 determining an amount of the particular resource that can be allocated; and
5 allocating the determined amount to the group of one or more processes .

- 1 5. The method of Claim 4, wherein determining further comprises:
2 calculating an available amount of the particular resource, and wherein if the
3 resource allocation request is less than or equal to the available amount, then
4 the determined amount is set to the amount of the resource allocation request.
- 1 6. The method of Claim 5, wherein if the resource allocation request is greater than the
2 available amount, then the determined amount is set to the available amount.
- 1 7. The method of Claim 5, wherein if the resource allocation request is greater than the
2 available amount, then the determined amount is set to zero.
- 1 8. The method of Claim 5, wherein calculating further comprises:
2 calculating a first amount by subtracting the total amount of the particular resource
3 allocated to the non-global partition from the first resource limit;
4 calculating a second amount by subtracting the total amount of the particular resource
5 allocated to the group of one or more processes from the second resource
6 limit; and
7 setting the available amount to the lower of the first amount and the second amount.
- 1 9. A machine-readable medium, comprising:
2 establishing, within a global operating system environment provided by an operating
3 system, a non-global partition which serves to isolate processes running
4 within the non-global partition from other non-global partitions within the
5 global operating system environment;

6 associating a first resource limit with the non-global partition, wherein the first
7 resource limit indicates a maximum amount of a particular resource that can
8 be allocated to the non-global partition; and
9 associating a second resource limit with a group of one or more processes within the
10 non-global partition, wherein the second resource limit indicates a maximum
11 amount of the particular resource that can be allocated to the group of one or
12 more processes.

1 10. The machine-readable medium of Claim 9, wherein a global administrator sets the
2 first resource limit.

1 11. The machine-readable medium of Claim 9, wherein a non-global administrator sets
2 the second resource limit.

1 12. The machine-readable medium of Claim 9, further comprising:
2 receiving a resource allocation request for the particular resource from a process
3 executing in the group of one or more processes;
4 determining an amount of the particular resource that can be allocated; and
5 allocating the determined amount to the group of one or more processes .

1 13. The machine-readable medium of Claim 12, wherein determining further comprises:
2 calculating an available amount of the particular resource, and wherein if the
3 resource allocation request is less than or equal to the available amount, then
4 the determined amount is set to the amount of the resource allocation request.

1 14. The machine-readable medium of Claim 13, wherein if the resource allocation request
2 is greater than the available amount, then the determined amount is set to the available
3 amount.

1 15. The machine-readable medium of Claim 13, wherein if the resource allocation request
2 is greater than the available amount, then the determined amount is set to zero.

1 16. The machine-readable medium of Claim 13, wherein calculating further comprises:
2 calculating a first amount by subtracting the total amount of the particular resource
3 allocated to the non-global partition from the first resource limit;
4 calculating a second amount by subtracting the total amount of the particular resource
5 allocated to the group of one or more processes from the second resource
6 limit; and
7 setting the available amount to the lower of the first amount and the second amount.

1 17. An apparatus, comprising:
2 a mechanism for establishing, within a global operating system environment provided
3 by an operating system, a non-global partition which serves to isolate
4 processes running within the non-global partition from other non-global
5 partitions within the global operating system environment;
6 a mechanism for associating a first resource limit with the non-global partition,
7 wherein the first resource limit indicates a maximum amount of a particular
8 resource that can be allocated to the non-global partition; and
9 a mechanism for associating a second resource limit with a group of one or more
10 processes within the non-global partition, wherein the second resource limit
11 indicates a maximum amount of the particular resource that can be allocated
12 to the group of one or more processes.

1 18. The apparatus of Claim 17, wherein a global administrator sets the first resource
2 limit.

1 19. The apparatus of Claim 17, wherein a non-global administrator sets the second
2 resource limit.

1 20. The apparatus of Claim 17, further comprising:
2 a mechanism for receiving a resource allocation request for the particular resource
3 from a process executing in the group of one or more processes;
4 a mechanism for determining an amount of the particular resource that can be
5 allocated; and
6 a mechanism for allocating the determined amount to the group of one or more
7 processes .

1 21. The apparatus of Claim 20, wherein determining further comprises:
2 a mechanism for calculating an available amount of the particular resource, and
3 wherein if the resource allocation request is less than or equal to the available
4 amount, then the determined amount is set to the amount of the resource
5 allocation request.

1 22. The method of Claim 21, wherein if the resource allocation request is greater than the
2 available amount, then the determined amount is set to the available amount.

1 23. The method of Claim 21, wherein if the resource allocation request is greater than the
2 available amount, then the determined amount is set to zero.

- 1 24. The apparatus of Claim 21, wherein calculating further comprises:
- 2 a mechanism for calculating a first amount by subtracting the total amount of the
- 3 particular resource allocated to the non-global partition from the first resource
- 4 limit;
- 5 a mechanism for calculating a second amount by subtracting the total amount of the
- 6 particular resource allocated to the group of one or more processes from the
- 7 second resource limit; and
- 8 a mechanism for setting the available amount to the lower of the first amount and the
- 9 second amount.